Please amend the claims as follows:

1. (previously presented) An ultrasound transducer for converting between acoustic and electrical energy, the transducer comprising:

transducer material having an array of elements and comprising a capacitive membrane connected with silicon; and

a backing block on at least one side of the transducer material, the backing block including an anechoic surface.

2-3. (cancelled)

4. (original) The transducer of Claim 1 wherein the anechoic surface comprises a Rayleigh dump with a surface having one of: at least one peak, at least one valley and combinations thereof in cross-section.

5. (original) The transducer of Claim 1 wherein the backing block comprises first and second different materials, the anechoic surface being at an interface of the first material with the second material.

6. (original) The transducer of Claim 5 wherein the first material is adjacent to the transducer material and the second material is spaced from the transducer material by the first material, the first material having an acoustic impedance within 10% of an acoustic impedance of the transducer material, the second material having an acoustic impedance at least 30% less than the acoustic impedance of the transducer material.

7. (original) The transducer of Claim 1 wherein the backing block comprises a block of material having acoustic impedance within 10% of an acoustic impedance of the transducer material.

8. (original) The transducer of Claim 7 wherein the block of material comprises a metal material.

9. (original) The transducer of Claim 8 wherein the metal material comprises one of: Aluminum and an Aluminum alloy.

10. (original) An ultrasound transducer for converting between acoustic and electrical energy, the transducer comprising:

transducer material having an array of elements;

a backing block on at least one side of the transducer material, the backing block including a block of first material adjacent to the transducer material, the first material having substantially no acoustic attenuation at a range of frequencies for operation of the array of elements.

11. (original) The transducer of Claim 10 wherein the first material comprises metal.

12. (original) The transducer of Claim 11 wherein the first material comprises Aluminum.

13. (original) The transducer of Claim 10 wherein the block of first material has a surface with a Rayleigh dump.

14. (original) The transducer of Claim 13 wherein the backing block further comprises an acoustically attenuative second material positioned at the Rayleigh dump adjacent to the block of first material.

15. (original) The transducer of Claim 10 wherein the first material has a thermal conductivity greater than the transducer material.

16. (original) The transducer of Claim 10 wherein the transducer material comprises silicon.

17. (original) An ultrasound transducer for converting between acoustic and electrical energy, the transducer comprising:

transducer material;

a backing block on at least one side of the transducer material, the backing block including a solid block of first material adjacent to the transducer material, the first material having a thermal conductivity greater than the transducer material.

18. (original) The transducer of Claim 17 wherein the solid block of material comprises a solid metal.

19. (original) The transducer of Claim 17 wherein the solid block of material has a surface spaced away from the transducer material with a Rayleigh dump, a second material with a lesser thermal conductivity than the first material positioned adjacent to the Rayleigh dump.

20. (original) The transducer of Claim 17 wherein the first material has an acoustic impedance within 25% of an acoustic impedance of the transducer material.

21. (currently amended) A capacitive membrane ultrasound transducer for converting between acoustic and electrical energy, the transducer comprising:

a silicon substrate supporting a plurality of flexible membranes;

a backing block adjacent the silicon substrate, the backing block having a solid block of first material adjacent to the silicon substrate ~~transducer material~~, a block of second material positioned adjacent to the first material away from the silicon substrate wherein a surface of contact between the first and second materials has at least one area angled relative to the silicon substrate to reflect acoustic energy away from the silicon substrate.

22. (original) The transducer of Claim 21 wherein the surface of contact forms a Rayleigh dump.

23. (original) The transducer of Claim 21 wherein the solid block of first material comprises a metal material, the second material having a greater acoustic absorption than the metal material.

24. (currently amended) A method for attenuating acoustic energy in a backing block, the method comprising:

(a) transmitting acoustic energy into the backing block with a membrane of a capacitive membrane ultrasound transducer, wherein the backing block is on at least one side of the capacitive membrane ultrasound transducer ~~transducer material~~ having an array of elements;

(b) reflecting the acoustic energy off of a Rayleigh dump surface in the backing block; and

(c) absorbing the acoustic energy passing through the surface.

25. (original) The method of Claim 24 wherein (b) and (c) comprises providing the surface between a solid block of a first material and a second material, the second material having a greater acoustic attenuation than the first material.

26. (cancelled)

27. (original) The transducer of Claim 1 wherein the backing block comprises a wave guide.